

### Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

### Listing of Claims:

1-10. (Cancelled)

11. (Currently Amended) A method ~~in a cellular mobile telecommunication system~~ for cell planning and preparing for a cell split when a cell tends to get congested or overloaded in a cellular mobile telecommunication system, wherein the steps of said method are performed in one or more nodes of said telecommunication system, said method comprising the steps of:

registering position related data comprising the locations for mobile users (MS) together with what service is used by each user in terms of bit rate; and,

creating an estimation of the traffic density within the cell as a function of said position related data; and,

selecting an optimal site for a new base station as a function of said position related data or said traffic density;

wherein maximizing the function

$$x_{opt}, y_{opt} = \max f(BR_n/PL_n, x_n, y_n) \text{ for all } n$$

gives the optimal site location for the new base station, where  $n$  is an index number for the mobile users of the cell,  $BR_n$  is the bit rate used,  $PL_n$  is the path loss and  $x_n, y_n$  is the location of the user  $n$ .

12. (Previously Presented) The method of claim 11, further comprising the step of registering the path losses experienced on the radio channels of the mobiles.

13-14. (Cancelled).

15. (Previously Presented) The method of claim 12, further comprising the step of generating a map showing the site of the new base station.

16. (Previously Presented) A cell planning tool for preparing for a cell split in a cellular telecommunication system, comprising:
- a control network for registering the location of mobile stations;
  - means for registering the services used by the mobile stations;
  - means for, based on the location and service data, estimating the traffic density of the cell; and,
  - means for selecting an optimal site for a new base station as a function of said location and service data or said traffic density;
- wherein the optimal site is based on the maximum of the function:
- $$x_{opt}, y_{opt} = \max f(BR_n/PL_n, x_n, y_n) \text{ for all } n$$
- where  $n$  is an index number for the mobile users of the cell,  $BR_n$  is the bit rate used,  $PL_n$  is the path loss and  $x_n, y_n$  is the location of the user  $n$ .
17. (Previously Presented) The cell planning tool of claim 16, further comprising means for registering the path losses of the radio channels allocated to the mobile stations.
18. (Previously Presented) The cell planning tool of claim 16, wherein an optimal location for a new site is established in a cell planning system node.
19. (Cancelled)
20. (Previously Presented) A cellular telecommunication system comprising base stations and mobile stations in communication with each other in a cell under supervision of a control network including a cell planning system node which collects data from the telecommunication system relating to the location of the mobile stations, their path losses on their radio channels and the services they use, and wherein said cell planning system node comprises data collecting and calculation

equipment which predicts an optimal place for a new base station as a function of said location, path loss or service data;

wherein the optimal site is based on the maximum of the function:

$$x_{opt}, y_{opt} = \max f(BR_n/PL_n, x_n, y_n) \text{ for all } n$$

where  $n$  is an index number for the mobile users of the cell,  $BR_n$  is the bit rate used,  $PL_n$  is the path loss and  $x_n, y_n$  is the location of the user  $n$ .

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